

Serial No. 10/648,805

Attorney Docket No. 14-018-RCE2

REMARKS

Claims 1-35 are pending. The applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

Claims 1-35 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement and as failing to comply with the enablement requirement. The applicant respectfully requests that this rejection be withdrawn for the following reasons.

The limitation that the target speed is continuously calculated in accordance with driving operation was said to be new matter and not described in the original specification. It is asserted in the office action that this limitation is not disclosed in the original specification. Claims 1 and 2 have been amended to recite that the target creep speed is repeatedly calculated in a predetermined control cycle. This wording is supported at least by page 21, lines 23-26, of the specification, which states that the processing of Fig. 3 is repeatedly executed with a predetermined control cycle. Therefore, the wording that is asserted to be new matter has been removed, and this rejection should be removed.

Claims 1-35 were rejected under 35 USC 102(b) as being anticipated by Kajiwara (US 5234071). The applicants respectfully request that this rejection be withdrawn for the following reasons.

In the Kajiwara reference, the speed of the vehicle when the driver stops depressing the accelerator pedal or the brake pedal is stored. Then, the stored speed is set as a target speed until the next time the driver depresses the accelerator pedal or the brake pedal. Therefore, in the Kajiwara device, the target speed is not calculated repeatedly in accordance with the driving

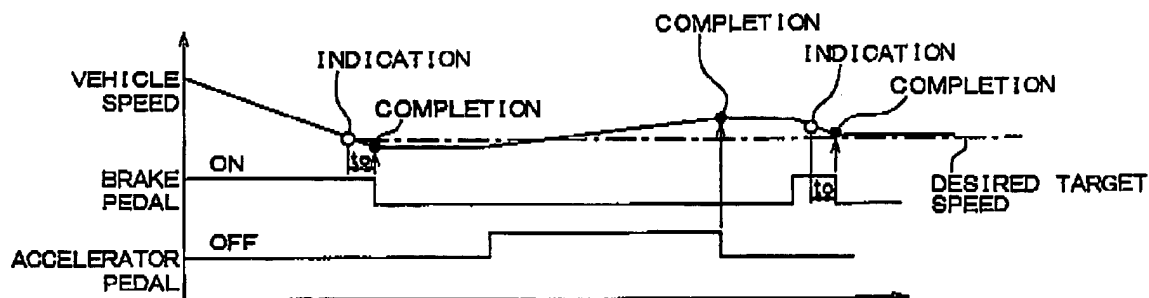
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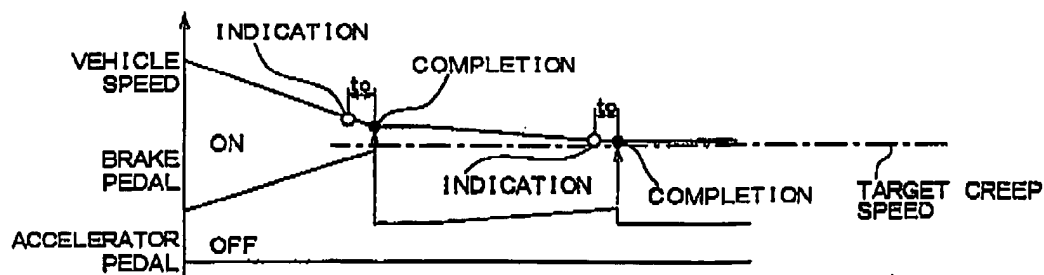
operation in a predetermined control cycle. Therefore, claims 1-35 cannot be anticipated by the Kajiwara reference, and this rejection should be withdrawn.

In the control apparatus of Kajiwara, a time-lag between a time of indicating a target speed setting and a time of completion of setting the target speed may occur based on disturbances such as the gradient or roll of the road surface. When the time-lag occurs, the target speed may be set incorrectly. Therefore, it is not possible to simply set a desired vehicle speed, and a driver has to depress the brake or accelerator pedal repeatedly to achieve the desired vehicle speed.

On the other hand, in the invention of claims 1 and 2, the target creep speed setting unit sets the target creep speed to a smaller value when the operation amount of the brake pedal increases. Therefore, as illustrated in the reference graphs below,



(a) Kajiwara reference



(b) Present invention

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the deceleration of the vehicle can be adjusted by a small value during the setting of the target creep speed. The driver can indicate a target creep speed setting after adjustment of the brake operation amount, by which the deceleration of the vehicle is small. Accordingly, even if a time-lag between the time of a target creep speed setting indication and the completion of setting the target creep speed occurs, it is possible to decrease any error that may occur during the time lag.

The device of Kajiwara reference stores a speed when the brake pedal is released, that is, when the braking operation is off. A brake sensor 8 is required for detecting the "off" state of the braking operation. In other words, Kajiwara only discloses a device including the brake sensor 8 for detecting "on" status or "off" status of the braking operation. Kajiwara fails to disclose a brake operation amount detection unit, as required by claim 2.

Further, because the device of Kajiwara reference does not include the target creep speed setting unit for setting the target creep speed based on the operation amount of the brake pedal, it cannot adjust deceleration of the vehicle during the time that the target speed is set. The reference graphs show a timing chart of the Kajiwara apparatus and the present invention showing respective speed errors generated during the target speed setting. In the Kajiwara apparatus, it is assumed that the vehicle speed decreases by predetermined deceleration when the braking operation is on.

When the deceleration during brake pedal operation is a fixed value in the Kajiwara apparatus, the desired target vehicle speed cannot be set by only one operation. Thus, after the vehicle speed increases again, it is difficult to set the desired target vehicle speed, even if the time of the indication of setting the target creep speed is early by a time period t_0 , as shown in the attached reference graph (a). The time period t_0 corresponds to a time-lag between the time

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period of the indication of the target creep speed setting and the time of completion of the setting of the target creep speed.

However, in the present invention, because the target creep speed is adjusted based on the operation amount of the brake pedal operated by the driver, it is possible to adjust deceleration by a smaller value. Therefore, it is easy to set the desired creep speed even if there is a time-lag between the time of indicating a target creep speed setting and the time that setting the target creep speed is completed, as shown in the attached reference graph (b).


Claims 2-35 depend on claim 1 or 2, directly or indirectly. Therefore, claims 2-35 are considered to be patentable for the reasons given above.

Entry of this amendment is respectfully requested because the amendment is considered to place the application in condition for allowance.

In view of the foregoing, the applicants submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

If there are any problems with the payment of fees, please charge any underpayments and credit any overpayments to Deposit Account No. 50-1147.

Respectfully submitted,


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